

**Photospheric flow fields and properties of embedded
small-scale magnetic flux concentrations**

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The association between the different scales of convection on the solar photosphere and the field strengths/flux contents of discrete magnetic flux elements are analysed using simultaneously recorded SOHO MDI high resolution intensity, velocity (Doppler) images and magnetograms. The convective flow patterns are mapped using the Local Correlation Tracking (LCT) algorithm. The locations and strengths of the flux elements with respect to the flow cells are shown to reflect the depths of the associated downflows. This property is in turn, in combination with results of calculations on the convective collapse process that forms strong field elements, used to derive some properties of the different scales of convection.

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